

REMARKS

Each of claims 1-7 and 9-21 remains pending and at issue in this application, with claims 1, 11, 18, and 20 being independent claims. With this Response, Applicants amend each of independent claims 1, 18, and 20. Each of the amendments finds support in the application as originally filed and, accordingly, the amendments add no new matter. In view of the amendments above and the remarks below, Applicants respectfully request reconsideration and favorable action in this case.

35 U.S.C. § 103 Rejections

Each of claims 1-7 and 9-21 stands rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over U.S. Patent No. 6,445,963 to Blevins et al. (hereinafter "Blevins") in view of one or more of U.S. Patent No. 6,421,571 to Spriggs et al. (hereinafter "Spriggs"); U.S. Patent Application Publication No. 2004/0186927 of Eryurek et al. (hereinafter "Eryurek"); U.S. Patent No. 6,826,521 to Hess et al. (hereinafter "Hess"); U.S. Patent Application Publication No. 2004/0153804 of Blevins et al. (hereinafter "Blevins_804").

As a preliminary matter, Applicants respectfully submit that the Office has failed to establish a prima facie case of obviousness with respect to any of the pending independent claims, at least because the Office has failed to clearly articulate any reason why the claimed invention would have been obvious. Instead, the Office has alleged only that modifying the system disclosed in Blevins to include elements of Spriggs would have been obvious because "one of ordinary skill in the art would have been motivated to have made such modifications because both Blevins and Spriggs are analogous art in the field of providing multiple views for similar information." Office action at page 9. However, the mere fact that two documents may be analogous art does not necessarily mean that a person of ordinary skill in the art would be motivated to combine them or to modify one in view of the other, that the resulting system, method, or apparatus would be predictable, that the elements could be combined to yield a predictable result, that the combination of elements would have been obvious to try, or that only a simple

substitution of one element for another was required. See MPEP § 2141. For at least these reasons, Applicants submit that the Office has failed to prove the unpatentability of the pending independent claims, and request reconsideration and withdrawal of these rejections.

Independent Claim 1

Independent claim 1, as amended, is directed to a method of providing a user interface for a process plant and recites, in part, generating information for a plurality of content layers of a process graphic display of process plant elements of the process plant, the process graphic display representing one or more smart process objects, ***each of which smart process objects includes information for the plurality of content layers***, wherein ***the information for the plurality of content layers of the process graphic display includes: (1) a set of graphic display elements*** common to each of the content layers, the set of graphic display elements illustrating a set of interconnected plant equipment to be illustrated in each of the plurality of content layers and (2) ***content layer unique display information*** to be displayed in conjunction with the common set of graphic display elements for each of the different ones of the content layers.

Neither Blevins nor Spriggs can render amended claim 1 obvious because neither Blevins nor Spriggs, individually or in combination, discloses or suggests the recited elements. In particular, neither Blevins nor Spriggs, even considered together, discloses or suggests a process graphic display representing one or more smart process objects, each of which smart process objects includes information for the plurality of content layers. The Office action admits that “Blevins does not explicitly teach a method where each of the different content layers are a combination of the common set of graphic display elements in conjunction with unique display information of interconnected plant equipment” (Office action at page 3), alleging instead that Spriggs teaches the elements admittedly missing from Blevins.

Spriggs teaches a display module having an object architecture. The display module “uses a connection interface and scripting based logic to link a collection of independent objects and views together into object groups that function together to

provide asset management and machinery diagnostic services.” Spriggs at col. 13, lines 26-32. Each of the alleged “different views” relied upon by the Office in asserting that Spriggs discloses the claimed element is represented by a separate object in Spriggs. That is, each of the bargraph view, the enterprise view, the instrument view, the plots view, the reference data view, the plots groups view, the plot session view, the plot session tree view, the event manager view, the history plot view, the status manager view, the document view, the journal editor view, the audits view, the asset management view, and the configuration view is embodied as a separate object. (See, e.g., Spriggs at col. 13, line 25 through col. 22, line 11.) While it appears that various ones of the views may be displayed concurrently on a user display, each of the views requires the separate creation of the corresponding object (e.g., the bargraph object, the enterprise object, the instrument object, etc.) and the objects – setting aside that the objects are not the recited smart process objects as one of ordinary skill in the art would understand the term – do not include information for the plurality of content layers of the process graphic display, as claim 1 recites.

The result of the system architecture described in Spriggs is a system in which different information can be displayed concurrently with the disclosed enterprise view 160 of Spriggs, which models the actual plant layout or the physical appearance of the asset or machine. However, the information displayed (plots, graphs, instruments, etc.) must be called up separately by instantiating corresponding software objects. A user wishing to view the enterprise tree view 152, the bargraph view 166, and the asset view 160, must individually instantiate or call each object in order for it to be displayed.

Additionally, while some of the objects, for example the bargraph object, can “be customized and configured on a per user basis” (Spriggs at col. 15, lines 39-41), customizing an object on a per user basis is not the same as including in a smart process object content layer unique display information to be displayed for each of the different ones of the content layers, wherein each of the different ones of the content layers is customized for a different type of user, recited by claim 1. The former might allow some objects to display user-configured information, but nevertheless does not include the recited information for **each** of the content layers.

By contrast, the method recited by amended claim 1 recites generating information for a plurality of content layers of a process graphic display of process plant elements of the process plant, the process graphic display representing one or more smart process objects, each of which smart process objects includes information for the plurality of content layers. The information includes a set of graphic display elements common to each of the content layers, and content layer unique display information to be displayed in conjunction with the common set of graphic display elements for each of the different ones of the content layers. That is, a configuration engineer may configure a process graphic display that displays various process plant elements, such as the reactor, pump, valve, and transmitter depicted in Figs. 6 and 7 of the instant application. Each of the process plant elements may be represented by a smart process object. Collectively, the process plant elements in the process graphic display may define the plurality of content layers. Each smart process object may include one or more associated graphic display elements as recited by claim 1 (such as a graphical depiction of a process element). Each smart process object may additionally include, for each of the plurality of content layers, information to be displayed with the graphic display elements. That is, the smart process object for a pump may include a graphic display element for the pump, pump information to be displayed to a maintenance operator with the graphic display element, and pump information to be displayed to a control operator with the graphic display element. Meanwhile, a smart process object for a valve may include a graphic display element for the valve, valve information to be displayed to a maintenance operator with the graphic display element, and valve information to be displayed to a control operator with the graphic display element.

A process graphic display instantiating both the pump smart process object and the valve smart process object defined above, would have two defined content layers: one for a maintenance operator and one for a control operator. Both layers would include the set of graphic display elements common to the content layers, and each would include content layer unique display information. This arrangement allows a configuration engineer to put together a process graphic display by instantiating the pump and valve smart process objects, without necessitating

configuration of individual displays for each of the maintenance operator and the control operator. No combination of Blevins and Spriggs discloses or suggests such a system.

Because neither Blevins nor Spriggs, even in combination, fail to disclose or suggest the elements recited by the method of claim 1, no combination of Blevins and Spriggs could render claim 1 unpatentable. Accordingly, Applicants respectfully request reconsideration and withdrawal of this rejection.

Independent Claim 11

Independent claim 11 is directed to a user interface system for a process plant having a process plant element and recites, in part, ***an object comprising information*** stored in a computer-readable medium regarding operation of the process plant element; and an execution engine to utilize the object information in a runtime environment to generate content for a plurality of content layers of a process graphic display, wherein ***the object information includes: (1) a set of graphic display elements*** common to each of the content layers, the set of graphic display elements illustrating a set of interconnected plant equipment to be illustrated in each of the plurality of content layers and (2) ***content layer unique display information*** to be displayed in conjunction with the common set of graphic display elements for each of the different ones of the content layers.

Independent claim 11 is patentable over Blevins and Spriggs, individually or combined, for reasons similar to those described above with respect to claim 1. In particular, Applicants respectfully point out that, contrary what the Office action alleges: (1) Blevins, even considered in view of Spriggs, does not disclose the object recited by claim 11, and (2) Spriggs does not disclose or suggest “information for the plurality of content layers of the process graphic display [including] (1) a set of graphic display elements common to each of the content layers...and (2) content layer unique display information...” Office action at pages 8-9.

Applicants respectfully submit that the object alleged by the Office (i.e., the data historian of Blevins) does not comprise the information recited by claim 11. That is, claim 11 recites an object comprising information...wherein the object information includes (1) a set of graphic display elements common to each of the

content layers...and (2) content layer unique display information. Even taking into consideration the disclosure of Spriggs, it is unclear how one of ordinary skill in the art could modify the system in Blevins such that the data historian would save content layer unique display information and a set of graphic display elements common to each of the content layers, or why a person of ordinary skill in the art would do so.

In any event, Applicants also submit that modifying the data historian disclosed in Blevins to include a set of graphic display elements would and content layer unique display information – even if that would result in the system claimed – would require impermissible hindsight, as no apparent reason exists for making such a modification. The Office alleges that “one of ordinary skill in the art would have been motivated to have made such modifications because both Blevins and Spriggs are analogous art in the field of providing multiple views for similar information.” Office action at page 9. However, the mere fact that two documents may be analogous art does not necessarily mean that a person of ordinary skill in the art would be motivated to combine them or to modify one in view of the other, or that the resulting system, method, or apparatus would be predictable.

Further, as described above, Spriggs does not teach a system in which **an object** (much less a data historian object, as alleged) comprises information for a plurality of layers, much less where such information includes the set of graphic display elements and the content layer unique display information, as claim 11 recites. To generate the alleged layers disclosed in Spriggs (i.e., the diagnostic data and plot formats, etc.; see Office action at page 9), the system of Spriggs must instantiate separate objects for each of the layers. Thus, the object information does not **include** a set of graphic display elements and content layer unique display information to be displayed in conjunction therewith, as claim 11 recites. Rather, Spriggs discloses a system in which various objects may be instantiated to provide different types of information (i.e., one object for each type of information: plots, graphs, instrumentation, etc.) and in which the set of graphic display elements is not common to each of the content layers but, instead, may be selectively displayed **with** various content layers (i.e., the plot view can be displayed with the graph view and the enterprise view). Thus, like claim 1 above, claim 11 is patentable over

Blevins and Spriggs, even considered together. Accordingly, Applicants respectfully request reconsideration and withdrawal of this rejection.

Independent Claim 18

Independent claim 18 is directed to a method of providing a user interface for a process plant and, as amended, recites, in part, generating content for a plurality of different types of users of the user interface by processing data regarding on-line and simulated operation of the process plant; and, rendering a selected portion of the content in a customized depiction of the process plant by determining the selected portion of the content in accordance with a current user type of the plurality of different user types, wherein the selected portion of the content includes: (1) a set of graphic display elements common to each of a plurality of customized depictions, the set of graphic display elements illustrating a set of interconnected plant equipment to be illustrated in the customized depiction for each of the plurality of different user types and (2) a set of depiction-specific display information to be displayed in conjunction with the common set of graphic display elements for the current user type that differs for each of the plurality of different user types, wherein ***each graphic display element has associated with it the set of depiction-specific display information for each of the plurality of customized depictions.***

Claim 18 cannot be rendered unpatentable by either Blevins or Spriggs, individually or combined, because neither one of the individual documents nor a combination of the documents discloses or suggests a set of graphic display elements wherein each graphic display element has associated with it a set of depiction-specific display information for each of a plurality of customized depictions. As described above, Spriggs discloses only various display objects, each for different information (e.g., plots, graphs, etc.), that may be displayed together on a single display. To the extent that the Office alleges that the enterprise view of Spriggs corresponds to a set of graphic display elements, each graphic display element of the enterprise view does not have associated with it a set of depiction-specific display information for each of the plurality of customized depictions, as claim 18 now recites. Instead, the enterprise view may be displayed concurrently with information generated by instantiating a separate object with or without the enterprise view.

For at least this reason, Applicants respectfully request that independent claim 18 is patentable over Blevins and Spriggs, individually or in combination. Accordingly, Applicants respectfully request reconsideration and withdrawal of this rejection.

Independent Claim 20

Independent claim 20, as amended, is directed to a method of configuring a user interface for a process plant and recites, in part, establishing a plurality of content layers for selectively displaying information related to the on-line and simulated operation of the process plant elements via customized views of the process graphic display, wherein each of the plurality of content layers includes: (1) a set of graphic display elements common to each of the content layers, the set of graphic display elements illustrating a set of interconnected plant equipment to be illustrated in the content layer and (2) content layer unique display information to be displayed in conjunction with the common set of graphic display elements for a particular content layer that differs for each of the plurality of content layers, ***wherein each of the graphic display elements has associated with it content layer information for each of the plurality of content layers.***

Independent claim 20 is patentable over Blevins and Spriggs, individually or in combination, for at least the reasons described above with respect to claim 18. That is, neither of Blevins and Spriggs individually nor a combination of them, discloses or suggests a set of graphic display elements wherein each graphic display element has associated with it content layer information for each of a plurality of content layers. As described above, Spriggs discloses only various display objects, each for different information (e.g., plots, graphs, etc.), that may be displayed together on a single display. To the extent that the Office alleges that the enterprise view of Spriggs corresponds to a set of graphic display elements, each graphic display element of the enterprise view does not have associated with it a set of content layer information for each of the plurality of content layers, as claim 20 now recites. Instead, the enterprise view may be displayed concurrently with information generated by instantiating a separate object with or without the enterprise view.

For at least this reason, Applicants respectfully request that independent claim 20 is patentable over Blevins and Spriggs, individually or in combination. Accordingly, Applicants respectfully request reconsideration and withdrawal of this rejection.

Dependent Claims

Each of the dependent claims depends, directly or indirectly, from one of independent claims 1, 11, 18, or 20. Accordingly, Applicants respectfully submit that each of the dependent claims is patentable at least because it further defines a claim reciting patentable subject matter. Thus, for at least the reasons described above with respect to the independent claim from which each dependent claim depends, Applicants request reconsideration and withdrawal of these rejections.

CONCLUSION

Accordingly, all remaining claims are in condition for allowance for the reasons provided above. Although Applicants believe that no fees or petitions are due, the Commissioner is hereby authorized to charge any fees or credit any overpayments to Deposit Account No. 13-2855 of Marshall, Gerstein & Borun, LLP under Order No. 06005/41114. Should the Examiner wish to discuss any of the foregoing comments or any claim amendments deemed needed to result in allowance, Applicants kindly request the Examiner to contact the undersigned by telephone at the number given below.

Respectfully submitted,

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